

What is claimed is:

1. A method of fabricating a temperature control device, wherein in a method of fabricating a temperature control device (1) equipped with a temperature control element (2) configured by soft-soldering a thermionic element (9) between the opposed electrodes (7) and (8) and a pair of heat conduction plates (3) and (4) disposed respectively on outside surfaces of respective insulating substrates (5) and (6) of the temperature control element (2) of the relevant temperature control device, in which electrodes (7) and (8) are formed respectively on opposing surfaces of a pair of insulating substrates (5) and (6) disposed in opposed positions as well, at least one plate (4) of said pair of heat conduction plates (3) and (4) is disposed on an outside surface of an insulating substrate (6) after soft soldering is performed with said thermionic element (9), an insulating substrate (6) on which a heat conduction plate (4) is disposed after soft soldering has a flexibility, and in said soft soldering of thermionic element (9), a soft solder (12) in which a layer thickness control member is mixed is used and is performed while adding a predetermined pressure.)

2. A method of fabricating a temperature control device, wherein in a method of fabricating a temperature control device (1) equipped with a temperature control element (2) configured by soft-soldering a thermionic element (9) between the opposed electrodes (7) and (8) and a pair of heat conduction plates (3)

(and (4) disposed respectively on outside surfaces of respective insulating substrates (5) and (6) of the relevant temperature control element (2), (in which electrodes (7) and (8) are formed respectively on opposing surfaces of a pair of insulating substrates (5) and (6) disposed in opposed positions as well, at least one plate (4) of said pair of heat conduction plates (3) and (4) is disposed on an outside surface of an insulating substrate (6) after soft soldering is performed, an insulating substrate (6) on which a heat conduction plate (4) is disposed after soft soldering has a flexibility, and after soft soldering of said thermionic element (9) is performed, a soft solder layer (12a) is flattened by adding a pressure multiplied by 0.8 - 1.5 of yield stress at the temperature as well as said soft solder layer (12a) is heated to a temperature which is the fusing point of a soft solder or less and the apparent initial softening point of a soft solder or more.)

3. The method of fabricating a temperature control device according to claim 2, wherein said soft solder layer (12a) contains a layer thickness control member.

4. A method of fabricating a temperature control device, wherein in a method of fabricating a temperature control device (1) equipped with a temperature control element (2) configured by soft-soldering a thermionic element (9) between opposed electrodes (7) and (8) and a pair of heat conduction plates (3) and (4) disposed respectively on outside surfaces of respective

insulating substrates (5) and (6) of the relevant temperature  
control element (2), in which electrodes (7) and (8) are formed  
respectively on opposing surfaces of a pair of insulating  
substrates (5) and (6) disposed in opposed positions as well,  
at least one plate (4) of said pair of heat conduction plates  
(3) and (4) is disposed on an outside surface of an insulating  
substrate (6) by making the grease layer (10) stood between,  
the relevant insulating substrate (6) on which a heat conduction  
plate (4) is disposed by making the grease layer (10) stood between  
has a flexibility, after a heat conduction plate (4) is disposed  
by making the grease layer (10) stood between the relevant plate  
(4) and an insulating substrate (6), said grease layer (10) is  
flattened by adding a pressure of about  $0.6 - 10 \text{ kg / cm}^2$  as  
well as heating to about  $120 - 170 \text{ }^\circ\text{C}$ .

5. The method of fabricating a temperature control device according to claim 4, wherein after soft soldering of said thermionic element (9) is performed, said soft solder layer (12a) is flattened by heating a soft solder layer (12a) to a temperature which is the fusing point of a soft solder or less and the apparent initial softening point of a soft solder or more and adding a pressure multiplied by 0.8 - 1.5 of yield stress at the relevant temperature as well, and flattening of said grease layer (10) and the flattening of said soft solder layer (12a) are carried out in the same time period.

## 6. The method of fabricating a temperature control device

according to claim 5, wherein prior to soft soldering of said thermionic element (9), a heat conduction plate (4) is disposed by making the grease layer (10) stood between the relevant plate (4) and an insulating substrate (6).

7. The method of fabricating a temperature control device according to claim 5, wherein after soft soldering of said thermionic element (9) is performed, a heat conduction plate (4) is disposed by making the grease layer (10) stood between the relevant plate (4) and an insulating substrate (6).

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